

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Original) A method for fabricating a Fe-Si based thin film, comprising the steps of:

preparing a substrate of which the crystal planes are orientated perpendicular to a main surface thereof and made of the same kind of ion, and

performing film forming operation on said main surface of said substrate to epitaxially grow a Fe-Si based thin film thereon.
2. (Currently Amended) The fabricating method as defined in claim 1, wherein the difference in lattice constant between said substrate and said Fe-Si based thin film is set to 16% or below.
3. (Currently Amended) The fabricating method as defined in claim 2, wherein the difference in lattice constant between said substrate and said Fe-Si based thin film is set within -6% to 16%.
4. (Original) The fabricating method as defined in claim 1, wherein said Fe-Si based thin film is fabricated by means of RF magnetron sputtering or CVD.
5. (Original) The fabricating method as defined in claim 4, wherein said substrate is heated within 600-900°C.
6. (Currently Amended) The fabricating method as defined in claim 1, wherein said substrate is made of (100)Si, (111)Si, (100)Y₂O₃-ZrO₂, (111)Y₂O₃-ZrO₂, (001)Al₂O₃, (100)CeO₂ or (111)CeO₂ which is non-doped.
7. (Original) The fabricating method as defined in claim 1, wherein said Fe-Si based thin film contains a crystal structure where Fe crystal planes and Si crystal planes are alternately stacked, respectively.

8. (Currently Amended) The fabricating method as defined in claim 7, wherein said substrate is made of (111)Si, (111)Y₂O₃-ZrO₂ or (111)CeO₂ which is non-doped, and said Fe-Si based thin film is orientated commensurate with the (110)/(101) plane thereof.

9. (Currently Amended) The fabricating method as defined in claim 7, wherein said substrate is made of (100)Si, (100)Y₂O₃-ZrO₂, (001)Al₂O₃ or (100)CeO₂ which is non-doped, and said Fe-Si based thin film is orientated commensurate with the (100) plane thereof.

10. (Currently Amended) The fabricating method as defined in claim 9, wherein said substrate is made of (100)Y₂O₃-ZrO₂ which is non-doped, and said Fe-Si based thin film is epitaxially grown in two rotational symmetry.

11. (Currently Amended) The fabricating method as defined in claim 9, wherein said substrate is made of (001)Al₂O₃ which is non-doped, and said Fe-Si based thin film is epitaxially grown in three rotational symmetry.

12. (Original) A method for fabricating a Fe-Si based thin film, comprising the steps of:

preparing a given substrate,

forming, on said substrate, a buffer layer of which the crystal planes are orientated perpendicular to a main surface thereof and made of the same kind of ion, and

performing film forming operation on said main surface of said buffer layer to epitaxially grow a Fe-Si based thin film thereon.

13. (Currently Amended) The fabricating method as defined in claim 12, wherein the difference in lattice constant between said buffer layer and said Fe-Si based thin film is set to 16% or below.

14. (Currently Amended) The fabricating method as defined in claim 13, wherein the difference in lattice constant between said buffer layer and said Fe-Si based thin film is set within -6% to 16%.

15. (Original) The fabricating method as defined in claim 12, wherein said Fe-Si based thin film is fabricated by means of RF magnetron sputtering or CVD.

16. (Original) The fabricating method as defined in claim 15, wherein said buffer layer is heated within 600-900°C.

17. (Currently Amended) The fabricating method as defined in claim 12, wherein said buffer layer is made of (100)Si, (111)Si, (100)Y₂O₃-ZrO₂, (111)Y₂O₃-ZrO₂, (001)Al₂O₃, (100)CeO₂ or (111)CeO₂ which is non-doped.

18. (Original) The fabricating method as defined in claim 12, wherein said Fe-Si based thin film contains a crystal structure where Fe crystal planes and Si crystal planes are alternately stacked, respectively.

19. (Currently Amended) The fabricating method as defined in claim 18, wherein said buffer layer is made of (111)Si, (111)Y₂O₃-ZrO₂ or (111)CeO₂ which is non-doped, and said Fe-Si based thin film is orientated commensurate with the (110)/(101) plane thereof.

20. (Currently Amended) The fabricating method as defined in claim 18, wherein said buffer layer is made of (100)Si, (100)Y₂O₃-ZrO₂, (001)Al₂O₃ or (100)CeO₂ which is non-doped, and said Fe-Si based thin film is orientated commensurate with the (100) plane thereof.

21. (Currently Amended) The fabricating method as defined in claim 20, wherein said buffer layer is made of (100)Y₂O₃-ZrO₂ which is non-doped, and said Fe-Si based thin film is epitaxially grown in two rotational symmetry.

22. (Currently Amended) The fabricating method as defined in claim 20, wherein said buffer layer is made of (001)Al₂O₃ which is non-doped, and said Fe-Si based thin film is epitaxially grown in three rotational symmetry.

23. (Withdrawn) A Fe-Si based thin film, wherein Fe crystal planes and Si crystal planes are alternately stacked, respectively.

24. (Withdrawn) The Fe-Si based thin film as defined in claim 23, which is orientated commensurate with the (110)/(101) plane thereof.

25. (Withdrawn) The Fe-Si based thin film as defined in claim 23, which is orientated commensurate with the (100) plane thereof.

26. (Withdrawn) The Fe-Si based thin film as defined in claim 25, which is orientated in two rotational symmetry.

27. (Withdrawn) The Fe-Si based thin film as defined in claim 25, which is orientated in three rotational symmetry.